# **F**5

## WARPLANEFORTHEWORLD





#### **ACKNOWLEDGEMENTS**

To illustrate an F-5 from every country which has operated the type is impossible, as many third world countries for some reason simply do not allow photography of even civil aircraft, let alone military ones. Fortunately in the West most countries are helpful, and with the exception of the Greek Air Force who were totally obstructive as usual, I would like to thank those in North America and Europe for their assistance — in particular, thanks must go to the

Canadian Armed Forces and the Spanish Air Force for being especially helpful.

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Unless otherwise credited, all photographs were taken by the author using Kodachrome film.

#### **ABBREVIATIONS**

Air to Air Missile	RJAF	Royal Jordanian Air Force
Air Base	RNLAF	Royal Netherlands Air Force
Air Combat Manoeuvring Instrumentation	RNoAF	Royal Norwegian Air Force
Aerospace Engineering and Test Establishment	ROCAF	Republic of China Air Force
Air Force Base	ROKAF	Republic of Korea Air Force
Aero Industry Development Centre	RSAF	Royal Saudi Air Force
Aggressor Squadron	SVNAF	South Vietnamese Air Force
	TAC	Tactical Air Command
	TFTAS	Tactical Fighter Training Aggressor Squadron
Canadian Forces Flying Training School	TFTS	Tactical Fighter Training Squadron
Composite Wing	TFW	Tactical Fighter Wing
	TNI-AU	Tentara Nasional Indonesia – Angkatan Udara
Forca Aerea Brasileira	TTW	Tactical Training Wing
Fuerza Aerea de Chile	TUDM	Tentara Udara Diraja Malaysia
Fuerza Aerea Mexicana	USAF	United States Air Force
Fighter Wing	USMC	United States Marine Corps
Fighter Weapons School	USN	United States Navy
	VF	Naval Fighter Squadron
		Naval Fighter Attack Squadron
	VHF	Very High Frequency
Royal Canadian Air Force	VMFT	Marine Fighter Training Squadron
	Air Base Air Combat Manoeuvring Instrumentation Aerospace Engineering and Test Establishment Air Force Base Aero Industry Development Centre Aggressor Squadron Canadian Armed Forces Combat Crew Training Squadron Canadian Forces Flying Training School Composite Wing Dissimilar Air Combat Training Forca Aerea Brasileira Fuerza Aerea de Chile Fuerza Aerea Mexicana	Air Base Air Combat Manoeuvring Instrumentation Aerospace Engineering and Test Establishment Air Force Base Aero Industry Development Centre Aggressor Squadron Canadian Armed Forces Combat Crew Training Squadron Canadian Forces Flying Training School Composite Wing Dissimilar Air Combat Training Forca Aerea Brasileira Fuerza Aerea de Chile Fuerza Aerea Mexicana Fighter Wing Fighter Weapons School Imperial Iranian Air Force Leading Edge Extension Wind VIAF VIAF VIAF ROCAF ROKAF ROKA

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#### INTRODUCTION

On 10 July 1989, only a few weeks short of the thirtieth anniversary of the first flight of the Northrop F-5, three passed through Prestwick on delivery from Palmdale, California en-route to the Republic of Singapore Air Force. These were the last of nearly 3,000 F-5s to be delivered, thereby ending a production run of exceptional length for a modern warplane.

The story of the F-5 began back in the 1950s, when Northrop was one of a number of manufacturers looking to develop a simple, cheap, lightweight fighter. In 1955 the company proposed its project, the N156 series, with seven configurations, including a carrier-borne variant. The N156T two seat tandem trainer was the first success—subject to successful flight tests, and was selected by the USAF's Air Training Command as a T-33 replacement. The aircraft took to the air for the first time on 10 April 1959, and was soon in production as the T-38 Talon. Almost 1,200 Talons were built, not only for the USAF, but the US Navy and NASA received small numbers, whilst some were exported under the Military Assistance Programme (MAP).

The 425 TFTS was initially a component of the Luke-based 58 TTW, later transferring to the 405 TTW, also based at Luke. The F-5s therefore were frequent visitors to Luke AFB, where this E model was photographed alongside an F-15 from a sister unit in the 405 TTW.

The N156F proposal was for a single seat lightweight fighter with two fuselage-mounted afterburning engines. The design was virtually identical to the Talon and had the same wing span. The wing had leading edge extension (LEX) and removable wing tip fuel tanks. To reduce the landing roll a brake parachute was fitted, as was an arrester hook for emergencies. Primary armament consisted of two 20mm M-39 cannons, and an AIM-9 Sidewinder air to air missile (AAM) on each wingtip — if no tip tanks were carried. Centreline and two wing mounted pylons could be used to carry an assortment of rockets, bombs or long range fuel tanks.

The company received the go-ahead in 1958 to produce three prototypes and a static test airframe. By the time of its maiden flight on 30 July 1959, only four months after that of its sister aircraft, the T-38 Talon, the N156F had been named Freedom Fighter. Further improvements to make the type truly multi-role included an additional internal fuel tank for added range, and a reconnaissance pack in an interchangeable nose cone. This version was known as the N156C. It also incorporated a strengthened wing to enable external loads to be carried on four wing pylons, instead of the two originally planned.



Bottom: Rather surprisingly for a training unit, the variant of the F-5 operated in least numbers by the 425th with the F-5F. This F-5F is also wearing Royal Saudi Air Force insignia, as Saudi pilots were 'borrowing' 425th aircraft to participate in a Red Flag exercise at Nellis. (GB Aircraft Slides)

Below: Over the years Williams F-5s have worn a variety of colour schemes. This 425th F-5E is wearing the 'Vietnam' type camouflage pattern prevalent in Tactical Air Command at the time, and the 'LA' tailcode allocated to the 405 TTW. (CB Aircraft Slides)





For over thirty years the international school for F-5 pilots, the 425 TFTS operated from Williams AFB, Arizona. The unit phased out its F-5As in the early 1970s in favour of the E model, but the two seat Bs soldiered on into the '80s. Illustrated is an F-5E in the high visibility scheme worn in the '70s. (Author's collection)



Below: Of the various colour schemes adopted by the aggressor F-5s the desert camouflage most suited operations over the Nellis ranges. (Ton van Schaik)



Opposite: A pair of Nellis based aggressors landing at CFB Cold Lake where they were participating in the Maple Flag exercise, which is the Canadian equivalent to Red Flag.

Below: The last two digits of the serial highlighted denote this aircraft as the one allocated to the commander of the 57 TTW. Individual squadron markings are not carried by aircraft of the 64th and 65th Aggressor Squadrons, though the 57 TTW's distinctive black and yellow checks are displayed on the fin.





Below: A rare shot of an F-5F belonging to the 57 TTW.



Below: Sitting at the holding point at Clark, this 26 AS aircraft awaits the groundcrews for a 'last chance' check. The aircraft is carrying a Sidewinder acquisition round on the port wing tip. Note that the nose is in the raised position for take-off.



Below: This 1975 build F-5E was one of the embargoed Ethiopian aircraft. The striking green, brown and tan camouflage pattern was officially known as 'Snake'.



Opposite: Silver painted F-5E proclaiming to be the mount of the 26th Aggressor Commander. Silver was one of the five paint schemes adopted for the aggressor fleet.

Below: Seven aircraft of the 26 AS at rest on the Kadena ramp. The unit had just completed a three-week deployment flying DACT against the based F-15 squadrons. Note the variety of colour schemes.







Below. Shades of blue would be an apt title for the attractive scheme of this Clark based aircraft. The Russian style two digit modex on the nose adds to the effect.



Below: The toned down low visibility markings tend to be difficult to discern amongst the shades of blue on aircraft 01535 of the 527 AS on the taxiway at Alconbury.







Opposite: Taxying clear of the Alconbury runway is a Tiger II in the 'Ghost' colour scheme of grey and blue.

Below: A 527 AS F-SE with long range fuel tank on the runway at Alconbury.







Opposite: A pair of 527 AS Tiger IIs on final approach to their Alconbury base.

Below: Against a cloudy background this light grey scheme makes this 527th machine almost invisible.





Opposite: The gear retracts as this 527 AS F-5E lifts off from Sculthorpe for a DACT mission against Spangdahlem based F-4G Phantoms.

Below: Silver '49 flaring for touchdown.





Opposite: The green, brown and tan scheme is officially known as 'Snake'. Aircraft 01551 of the 527 AS was photographed at RAF Wyton.

Below: With an ACMI pod on the starboard wing tip this 527 AS F-5E crosses the Sardinian coast on recovery to Decimomannu. (Author's collection)







Opposite: Photogenic Tiger II in the 'Snake' camouflage scheme on the taxiway at Alconbury. The squadron used the callsign 'Baron', taken from that well known First World War ace.

Below: With undercarriage retracting, aircraft 01560 climbs out of Alconbury for another encounter over the North Sea. A previous adversary, Eskadron 726 of the Royal Danish Air Force have left their mark in the shape of their unit insignia above the port wing root.



Below: The non-standard European aggressor scheme on this 527th machine could perhaps be explained by the fact it was a recent attrition replacement from Nellis.



Below: This F-5E in an unusual tan and green camouflage belongs to the FWS at Miramar, where it was photographed touching down. This unit now operates the F-16N alongside A-4 Skyhawks in the aggressor role.



Below Sharing the Oceana ramp with A-6 Intruders and F-14 Tomcats is this F-5E of VF-43 'Challengers'. This unit has since relinquished its Tiger IIs.



Below: An interesting array of stores on the wing pylon of this CF-5D on the ramp at Cold Lake. The 'X' on the rudder of this aircraft, the first CF-5D built, denotes it belongs to the AETE (the 'X' standing for experimental).



Overleaf: After gaining their wings on the CT-114 Tutor, CAF pilots destined for the CF-18 must successfully complete an advanced flying course on the CF-5. Part of the syllabus includes air to air refuelling from the two specially adapted Boeing CC-137s. Here a student approaches the drogue basket trailed from the CC-137, whilst the instructor looks on from a formating CF-5D.

Opposite: In 1989 419 'Moose' Squadron painted this CF-5A in special markings to commemorate a squadron anniversary. Note the Moose painted on the fin. (CAF)

Below right: To complement the Moose on the fin, a giant sized Maple leaf adorns the underside of this aircraft. (CAF)









Opposite: An impressive shot of an AETE CF-5A during a ground attack training mission. Note the cameras in the reconnaissance nose. (AETE, CAF)

Below: An AETE CF-5D acting as chase plane formates on a CT-33A. (Peter Foster)







Opposite: The streamlined fuselage and thin wing are evident in this shot of a CF-5D on the Cold Lake flightline.

Below: Note the dummy canopy painted on the undersides of this aggressor CF-5D of 419 Squadron. This features on CAF CF-18 aircraft also, and helps to confuse an adversary during air to air combat.







Opposite: A gaily coloured CF-5D of 419 Squadron in aggressor markings.

Below: A few CF-5Ds retain their natural metal finish, such as this 419 Squadron machine over the Primrose Lake training area. The serial number 116841 on the fin denotes it is the forty-first CF-5D built. The official CAF designation for the F-5 is the CF-116, and serial numbers of single seaters began with the figure seven, and eight for the two seat D model.



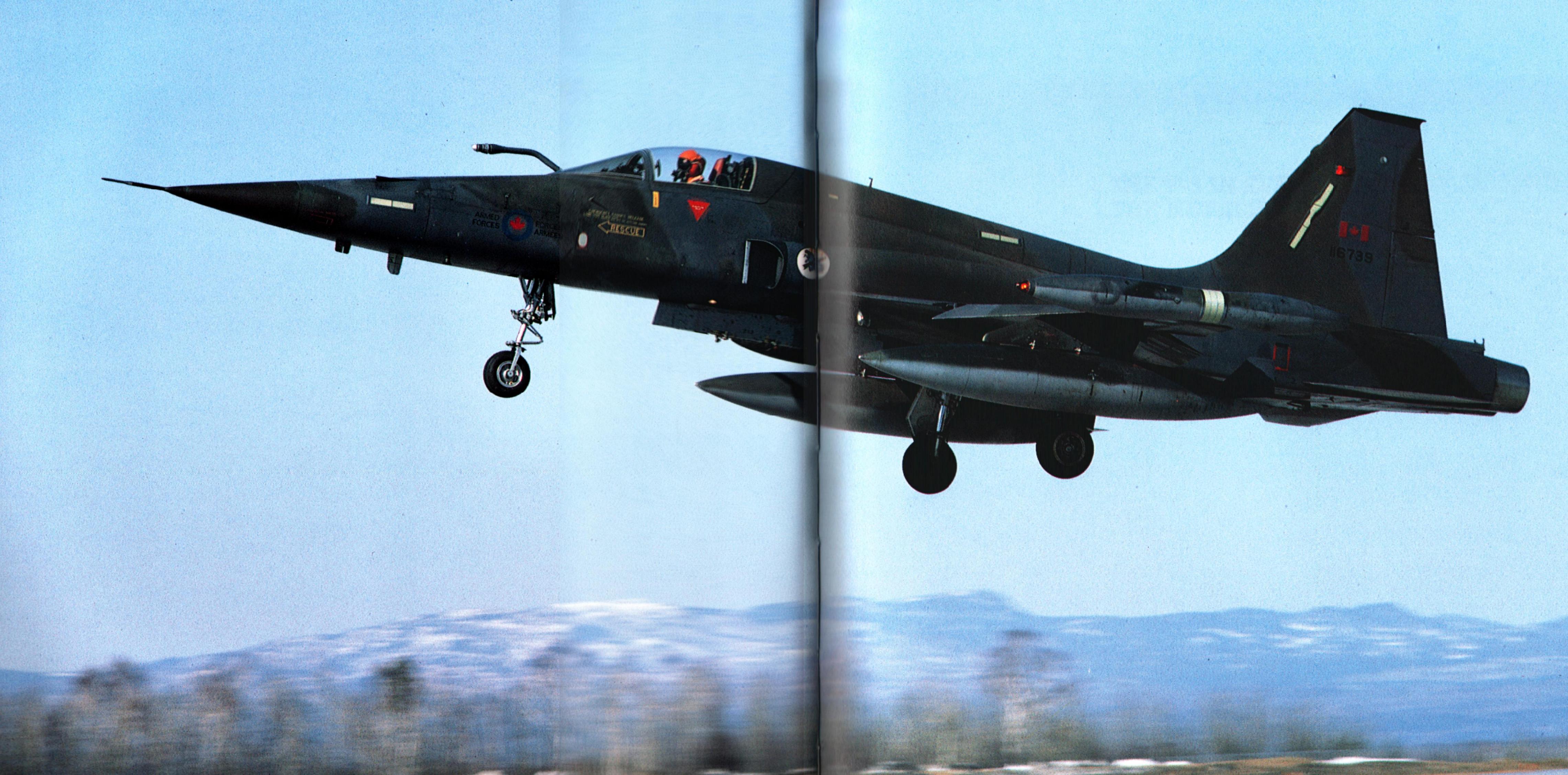


Overleaf: A CF-5A of 433 Squadron about to land at its Bagotville base. For some reason this unit carried the unit badge on the port intake only. This unit currently operates the CF-18 Hornet. (Peter Foster)

Opposite: A 419 Squadron CF-5D taxies from the Cold Lake ramp to participate in a Maple Flag exercise. This camouflage scheme is almost identical to the USAF 'Snake' scheme worn on their aggressor F-5s.

Below: Aircraft of 434 Squadron were easily identifiable due to the blue fin band containing a white schooner, and sometimes used the radio callsign 'Schooner Pirates'.





Below: Although fitted with a brake parachute, the pilot of this 434 Squadron CF-5AR has elected not to use it on this occasion, and has kept the nose raised to apply aerodynamic braking during the landing roll at Cold Lake. This photograph was taken in 1984 when the squadron was based at Bagotville but operating from Cold Lake during a Maple Flag exercise.



Below. A two-seater NF-5B of the training unit 313 Squadron landing at Bruggen. This aircraft has since been sold to Turkey.





Opposite: This 314 Squadron NF-5A was photographed whilst taking part in the 1988 NATO Tactical Air Meet at Sollingen.

Below: A 314 Squadron NF-5A in an attractive blue camouflage scheme.



Opposite: Loaded down with three long range fuel tanks, this 313 Squadron NF-5A lands at Waddington where it was deployed for a NATO exercise. In the past few years some of the Dutch NF-5 fleet have received a low visibility grey paint scheme.

Below: The golden centaur of 314 Squadron stands out well on the old camouflage scheme of this NF-5A on the runway at Bruggen.







Opposite: In pristine condition and minus unit markings, this aircraft, K-3001, was the first Dutch NF-5A. It spent most of its life with the Test Group at Twenthe, but is currently on the strength of 314 Squadron.

Below: An NF-5B of 314 Squadron about to touch down at Fairford.



Opposite: This 315 Squadron NF-5A wears patriotic red/white/blue markings for the 1980 display season.

Below: A regular attraction during the airshow season is the Dutch solo NF-5 display. The aircraft selected is usually painted like this 314 Squadron machine, specially for the season.







Opposite: A pair of grey painted 316 Squadron aircraft rotate from the Sollingen runway. Note the aircraft nearest the camera is devoid of unit markings.

Below: K-3017, a 316 Squadron NF-5A departs Abingdon carrying a baggage pod on the centreline pylon.



Overleaf: Snapped as the tyres are about to make contact with the Bruggen runway, K-3025 is an NF 5A of 315 Squadron from Twenthe.

Opposite: Photographed on the runway at Greenham Common is 315 Squadron NF-5Å K-3019. The aircraft was participating in the 1981 International Air Tattoo, hence the attractive, specially applied paint scheme.

Below: Decelerating with the aid of a brake parachute is an NF-5A of 316 Squadron in an all over grey scheme.







Below: All the Norwegian F-5Bs have been through an update programme to extend their lives, and this is perhaps the reason that this aircraft of 336 Skvadron looks so immaculate. Only one of the fourteen F-5Bs delivered has been lost, and all the survivors serve with 336. Very few of the unit's aircraft carry unit markings these days.



Opposite: Sixteen RF-5A reconnaissance variants were delivered to 717 Skvadron at Rygge; the sole operator until its disbandment in 1980. Thereafter the recce birds were flown by 336 Skvadron, who operated a large fleet of all three models received by the RNoAF. Norway has now retired all its RF-5As, and six have been transferred to the Turkish Air Force. Illustrated is an RF-5A in 336 Skvadron markings.

Below: Norwegian F-5s carry only the last three digits of their USAF serial numbers, as seen on this 336 Skvadron F-5B at Bruggen.





Opposite: Oerland Air Base near Trondheim is home to 338 Skvadron, which was the last Norwegian unit to convert to the F-16. As an F-5 unit 338 Skvadron aircraft were rare visitors to Britsh airfields, though F-5A '224' was photographed during a visit to Wyton.

Below: With the camouflaged hangar and snow on the ground this photograph could only have been taken in Norway. Despite the absence of unit markings this F-5A belongs to 338 Skvadron at Oerland where the shot was taken. One or two Norwegian F-5s were applied with a green camouflage scheme as an experiment — which was never taken up, hence the colour of the drop tanks.





Below. When the RF-5As were on the strength of 717 Skvadron they always seemed to be devoid of unit markings, as was the case when this aircraft was photographed landing at Bruggen. This aircraft has since been transferred to the Turkish Air Force.



Below: SF-5B from 732 Escuadron in the clear blue skies over Western Spain.



Overleaf: An Escuela de Reactores F-SB displays its upper surfaces to the camera.

Opposite: An SF-5B of the Escuela de Reactores 732 Escuadron in a climbing turn whilst on a training flight from Talavera. The 'cotton wool' underneath is not clouds — but fog, a far from common event in Spain.

Below: This Ala 21 SF-5B looks immaculate, having just come out of the paint shop at Moron.

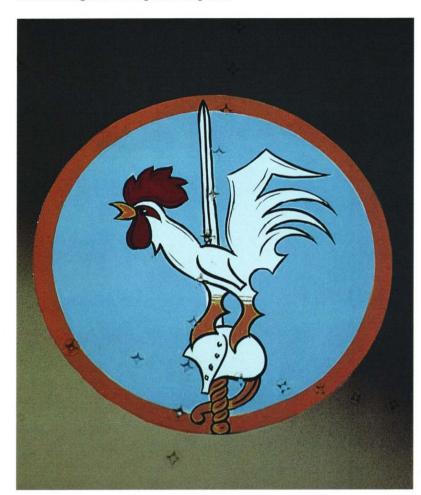






Opposite: A 732 Escuadron SF-5B breaking away from the lead aircraft over a Spanish countryside shrouded in fog.

Below: The unit badge of 211 Escuadron. Sister unit, 212 Escuadron, has the same badge but with a green background.





Opposite: An SF-5B diving earthwards at a great rate of knots. Northrop's nimble lightweight is a delight to fly in.

Below: Rather weather beaten and badly in need of a coat of paint, this 212 Escuadron SF-5A was photographed at Zaragoza where it was deployed to use the nearby weapons ranges.









Below: With undercarriage retracting, this 212 Escuadron SF-5B climbs out of Moron Air Base.



Below: Aircraft from the second batch built featured a new flattened, more streamlined nosecone, as seen on this aircraft of Fliegerstaffel 1. The remainder of the fleet is also being fitted with the new nose.



Overleaf: A pair of Flugwaffe F-5Es on approach to Dubendorf Air Base on the outskirts of Zurich. The lead aircraft carries the marking of Fliegerstaffel 13.

Opposite: An F-5E wearing the Tiger insignia of Fliegerstaffel  $11\,$  taxies clear of the runway at Dubendorf.

Below: All Swiss Tigers are in the two tone air superiority grey colour scheme as seen on this Fliegerstaffel 11 F-5E on final approach to Dubendorf.





Opposite: As aircraft are frequently rotated between bases many Swiss F-8s do not carry unit markings, unlike this machine of Fliegerstaffel 19, which is believed to operate from Alphach in time of war.

Below: this F-5E of Fliegerstaffel 13 still has the 'old' nosecone. This unit is comprised of reservists, many of whom are Swissair pilots.





Opposite: This F-5E, J-3014, was the first one to be assembled by the Federal Aircraft Factory at Emmen, and has since been fitted with the new nosecone. With Fliegerstaffel 18 insignia on the nose it was photographed at its Dubendorf base.

Below: The unit insignia on the nose of this F-5E identifies it as belonging to Fliegerstaffel 18.







Overleaf: This camouflage scheme is definitely not standard Turkish Air Force pattern. This F-9B is a recent acquisition from the USAF. (Aad Wever)

Below: Early build F-5A from 5 Jet Base at Merzifon.





Below. With cockpit transparencies covered by brown paper, this F-5A is towed to the spray shop at the overhaul facility at Eskisehir. The aircraft belongs to 5 Jet Base at Merzifon.



Below: A Kenya Air Force F-5E photographed on a test flight prior to delivery. (Northrop)





Overleaf: The Sudan Air Force took delivery of two F-5Fs in 1982, with ten F-5Es following two years later. The two seaters were photographed on delivery through Prestwick. (Pete Smith)

Opposite: The first F-5F for the Kenya AF on its delivery flight through Prestwick (Pete Smith)

Below: Morocco operated both the F-5A and B models from its base at Kenitra, and these were supplemented by a small number of ex-Iranian machines including two RF-5A reconnaissance variants. Some of these remain operational, and the F-5 fleet has been expanded by the delivery of sixteen E and four F models in 1981. These have seen action against Polisario guerrillas. Recently, a small number of ex-Alconbury based USAF F-5Es have been delivered. Illustrated is an F-5E in desert camouflage. (CB Aircraft Slides)





The Tunisian Air Force ordered F-5s in 1982, and soon afterwards took delivery of eight E and four F models. These have since been supplemented by seven ex-USAF F-5Es from Alconbury.

Below: Tunisian F-5E in an attractive camouflage scheme on delivery through Alconbury.



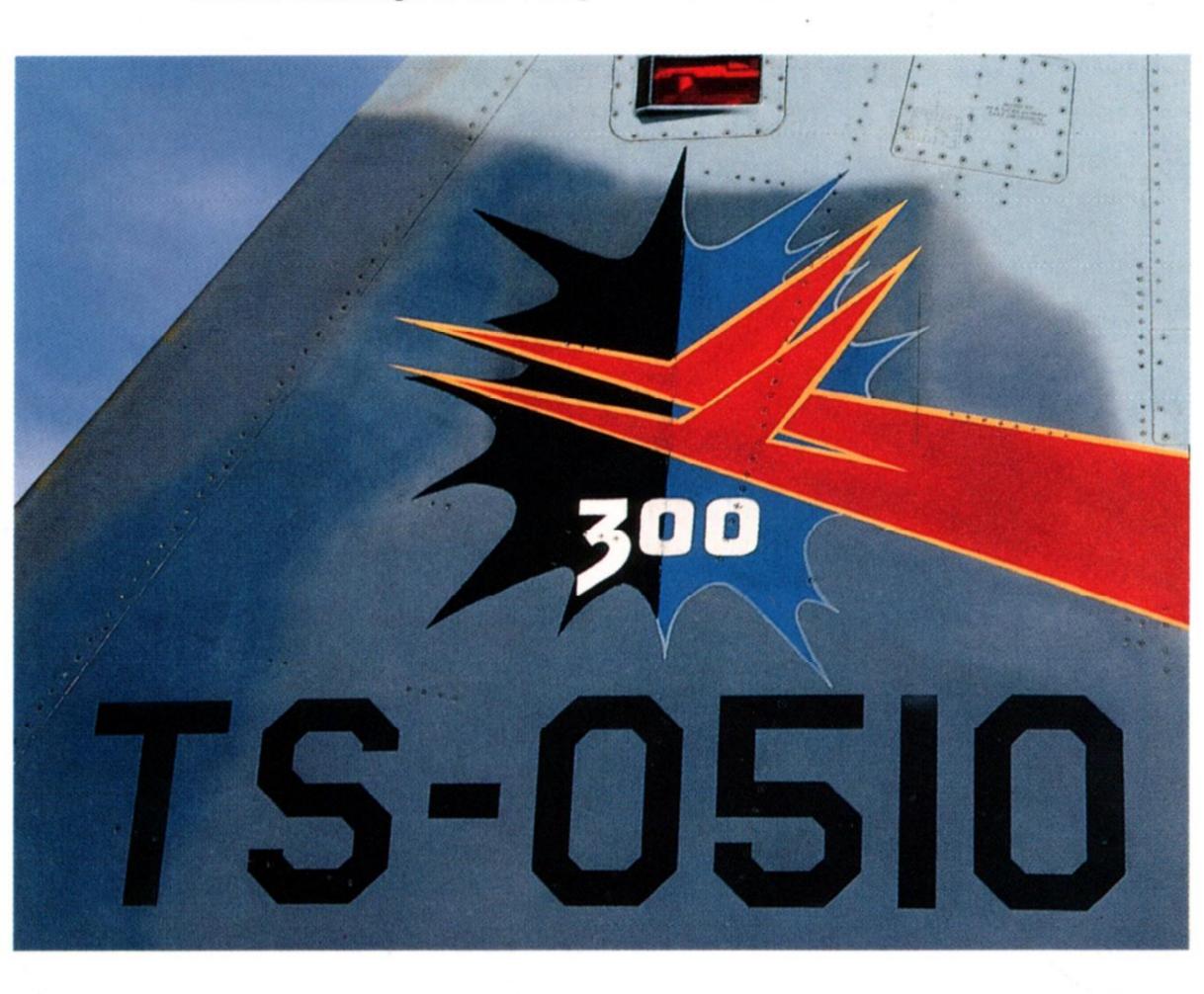
Below: Sixty-six two seater F-5F's were license built by AIDC. This one was photographed at a defence exhibition at Taipei/Sungshan airport.



The task of air defence of Indonesian territory is undertaken by one unit of Tiger IIs, this being 14 Skwadron, 300 Wing of the Tentara Nasional Indonesia — Angkatan Udara (TNI-AU). This translates to Indonesian Air Force, and the unit which comprises eight E and four F models is located at Iswahyudi AFB, Madiun, which is on the large island of Java.

Opposite: One of 14 Skwadron's colourful F-5Es photographed at Jakarta/Kemayoran airport.

Below: Markings of 300 Wing TNI-AU on an F-5E.









Above: Unit insignia of 14 Skwadron TNI-AU.

The Republic of Korea Air Force (ROKAF) still operates a large fleet of the Northrop fighter and, apart from the RF-5E which it never received, all variants are still in its inventory. Modest numbers of the A and B models operate alongside 149 E and fifty F variants, some of which were license built. The country is absolutely paranoid about security, and photography is prohibited at Seoul's international airport, and at one of the main tourist attractions, the revolving restaurant on top of the Seoul tower in the middle of the city, similar to the CN Tower in Toronto. For this reason details of ROKAF units are unreliable, but they are believed to be as follows: at Kwangju the 1 TFW comprises 115, 122 and 123 TFS, Suwon has the 10 TFW with the 102, and 105 TFS, plus one other unit, whilst the squadron resident at Kunsan is believed to be the 111 TFS.

Opposite: A number of ROKAF F-SEs have recently adopted an all over grey scheme as seen on this aircraft landing at Osan. The unit insignia underneath the cockpit is believed to be that of the 111 TFS at Kunsan.



Above: Northrop built ROKAF F-5E in USAF Vietnam-type tactical camouflage scheme. (Northrop)

The Tentara Udara Diraja Malaysia (TUDM), which translates to Royal Malaysian Air Force, uses the F-5E in the air defence role from the former Australian base at Butterworth. These are operated by Nos. 11 and 12 Squadrons. The TUDM initially received two F-5Bs, but these have since been sold to Thailand, and eventually a total of seventeen E, four F and two RF-5Es were delivered.

Opposite: An 11 Squadron F-5E at Butterworth. (David Oliver)





Above: Malaysia was the first customer for the RF-5E Tigereye with an order for two, the second of which is illustrated prior to delivery. (GB Aircraft Slides)

An early customer for the F-5A was the Philippines Air Force which received nineteen A and three B Models to equip the 6 TFS of the 5 FW at Basa. The first aircraft arrived in 1965 to replace F-86 Sabres in the air defence role. They were later supplemented by F-8H Crusaders, which have since been retired, leaving the F-5s as the sole jet fighter in the Phil.AF. inventory. Attrition has been heavy, and only eight A and two B models remain at the time of writing. It is likely however that the USAF F-5Es of the 26 AS will be handed over to the Phil.AF. now that they have been replaced by the F-16.

Opposite: The Cobra insignia of the 6 TFS Phil.AF.



Opposite: The Blue Diamonds aerobatic team used the F-86 until replaced by the F-5A. The team gave its last performance with the F-5 in the mid 1980s, hence the shabby paintwork on this aircraft.

Below: one of the two remaining F-5Bs of the Phil.AF







Above: In 1987 the Phil.AF, started to give its F-5 fleet a badly needed overhaul and coat of paint, as seen on these 6 TFS aircraft on the Basa flightline.

One of the most modern and well equipped air arms in South East Asia is that of Singapore. With the possible exception of Vietnam, this tiny state is surrounded by friendly countries, yet has a large fleet of well over one hundred A-4, F-5, F-16 and Hunter combat aircraft, and E-2 Hawkeye surveillance aircraft. This inventory of primarily offensive aircraft, added to its absolute paranoia about security, must be making some of its neighbours extremely anxious. The Republic of Singapore Air Force is believed to have received thirty-six F-5Es — including the last batch built, and ten F-5Fs. These are operated by 144 'Lynx' Squadron at Paya Lebar and 149 'Shirkra' Squadron at Tengah, and if rumours are to be believed, underground hangars have been built at the latter.

Opposite: This 144 Squadron F-5E was photographed on a rare visit to the Malaysian base at Butterworth where it was participating in an exercise. (David Oliver)



Opposite: Singapore F-5s can be seen in this 'jungle' type camouflage or an overall grey scheme. This aircraft of 149 Squadron was photographed at Butterworth in Malaysia. (David Oliver)

Below: An F-5F of 149 Squadron landing at Clark AB.







Above: The last three F-5Es built by Northrop seen on delivery through Prestwick en-route to the Singapore Air Force. (Pete Smith)

Deliveries of F-5A/B models to the Royal Thai Air Force initially went to 13 Squadron at Don Muang, which later relocated to Nakhom Ratchasima (formerly known as Korat) and became 103 Squadron. The unit flies the survivors of twenty-four A, four RF-5A and two F-5Bs supplied under MAP, and two B models acquired from Malaysia. Later deliveries comprised thirty-two new E and six F models from the Northrop production line, and a further ten ex-USAF F-5Es. Nakhom Ratchasima is home to the 1st Fighter Wing, comprising 102 and 103 Squadrons, the former operating the newer F-5E. The remaining squadron, which also operates the E model, is 403 Squadron of 4 Fighter Wing at Ta Khli.

Opposite: Wearing colourful aggressor type markings this F-5E belongs to 102 'Cobra' Squadron, and was photographed at a display at Don Muang. (Chris Pocock)



Below: An F-8A of 103 'Tiger' Squadron Royal Thai Air Force. (Chris Pocock)



## LATIN AMERICA

The largest air arm in South America, the Forca Aerea Brasileira (FAB) uses the Tiger II to supplement its Mirage III force in the air defence role. Thirty-six F-5Es were

Overleaf: Equipped with AIM-9 Sidewinder missiles, the first FAB F-5E is illustrated on a test flight. (Northrop)

Below: A USAF F-SF destined for Brazil with dual markings on the fin.  $(Maurice\ Bertrand)$ 

delivered to equip 1 and 2 Esquadrao of the 1st Fighter Group at Santa Cruz. Rather strangely, the four two-seaters bought were B rather than F models. The FAB Tiger IIs have refuelling probes fitted to enable them to be in-flight refuelled by Boeing KC-137 and Lockheed KC-130 tankers. Acceptance of ex-USAF aircraft has just been completed, comprising twenty-four E and four F variants.







Opposite: In 1981 the Fuerza Aerea Mexicana (FAM) ordered ten F-5Es and two Fs to equip 401 Escuadron at Santa Lucia for air defence duties. The only other jet combat aircraft in the FAM inventory were ageing AT-33 armed trainers. Illustrated is an FAM F-5F. (Northrop)

Below: The Fuerza Aerea de Chile (FAC) accepted its first F-5E in 1976, eventually receiving fifteen E and three F models to equip 7 Grupo at Antofagasta. These aircraft, like many export Tiger IIs had a dorsal fin fillet for improved manoeuvrability and a VHF blade aerial on the spine, as seen in this view of a 7 Grupo F-5E. (Northrop)



Below: The bulk of ex-USAF aircraft delivered have come from the 425 TFTS at Williams AFB. One of the aircraft destined for the FAB was photographed on the Williams ramp prior to delivery to Brazil, wearing both FAB and USAF markings. (Maurice Bertrand)



## MIDDLE EAST

The Royal Jordanian Air Force (RJAF) has been a member of the F-5 club for many years, initially receiving thirty A and six B models from the IIAF. Fifteen of these have since

Overleaf: A desert camouflaged F-5E of 9 Squadron RJAF.

Below: A pair of RJAF F-5Es which participated in the 1981 International Air Tattoo at Greenham Common.

been handed on to the Greek Air Force, the remainder serving with 6 Squadron at Mafraq. Numbers 1, 2 and 5 Squadrons also at some stage operated the F-5A. A sizeable force of Tiger IIs have been delivered, and equip 9 and 17 Squadrons at Prince Hassan Air Base, formerly known as H5. Another F-5E unit, No. 11 Squadron at Azraq, is believed to have converted to the Mirage F1.







Above: Heavily loaded with three long range fuel tanks, this F-5E of 9 Squadron RJAF has the nose leg extended by three degrees to decrease the take-off run.

Well over one hundred Tiger IIs equip the Royal Saudi Air Force (RSAF) whilst most of the twenty F-5Bs delivered in 1973 remain on the inventory. Tiger IIs currently serve with 3 and 10 Squadrons at Taif, 15 at Khamis Mushayt and 17 at Tabuk. A previous operator, 7 Squadron at Dhahran, has re-equipped with the Tornado. The RSAF was the second and final customer for the RF-5E Tigereye with an order for ten aircraft for 17 Squadron.

Opposite: An RF-5E Tigereye in Saudi desert camouflage scheme. (Pete Smith)

Overleaf: The last new customer for Northrop's lightweight fighter was the Bahrain Amiri Air Force who took delivery in 1988 of eight E and four F models. This was the first fixed wing aircraft for the air arm of this Persian Gulf island. These four aircraft were photographed staging through Prestwick en-route to Bahrain's International airport at Muharraq. (Pete Smith)





Below: At least one RF-5E has been painted in an all-black scheme, and was photographed staging through Prestwick on delivery. Note that this aircraft has a refuelling probe to enable it to refuel from RSAF C-130 and KE-3 tanker aircraft. (Pete Smith)



